



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1

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BOSTON, MASSACHUSETTS 02114-2023

March 9, 2005

OFFICE OF THE
REGIONAL ADMINISTRATOR

M. A. Prescott
Chief, Deepwater Ports Standards Division
United States Coast Guard
2100 Second Street, S.W.
Washington, DC 20593-0001

Re: Neptune LNG LLC Deepwater Port Act Application Completeness Review Comments

Dear Mr. Prescott:

This letter provides EPA's comments on Neptune LNG LLC's application to construct and operate a deepwater port off the coast of Massachusetts approximately 10 miles southeast of Gloucester. We conducted our review in accordance with the May 20, 2004 Memorandum of Understanding on Deepwater Port Licensing (MOU) which calls for participating agencies to review Deepwater Port Act (DPA) license applications for "completeness and accuracy" to assist the United States Coast Guard (USCG) and Maritime Administration (MARAD) in determining whether an application is complete.

The application describes a proposal to construct and operate a deepwater port in federal waters west of and immediately adjacent to the Stellwagen Bank National Marine Sanctuary in an area of active commercial fishing. The Neptune deepwater port would allow for LNG carriers to moor at one of two proposed unloading buoys located 2.3 miles apart in approximately 250 feet of water. While moored, the LNG carriers would vaporize, odorize and meter natural gas which would then be transmitted to shore via a 24-inch gas transmission line, approximately 9 miles long. The LNG carriers that would serve the port would combine the storage and transportation capabilities of a conventional LNG carrier with dedicated onboard LNG vaporization facilities. Construction of the project will involve trenching to install the gas line and buoy anchor system. Operation of the project will result in air emissions, process water discharges, and water intake and discharge for cooling purposes. The project will require permits from EPA under the Clean Air Act and the Clean Water Act.

Although we have had one meeting with the applicant team (February 24, 2005 at EPA's New England Regional Office), our comments are based entirely on our review of the five volume application and supporting materials package provided by the applicant on February 22, 2005. Based on our review of the documents, we believe the application is incomplete with respect to the impacts from construction and operation of the project to resources within EPA's areas of jurisdiction and expertise including air quality and water quality. The detailed comments in the attachment to this letter provide the basis for our conclusion and identify information that EPA needs under applicable legal requirements to process the appropriate air and water permits. We

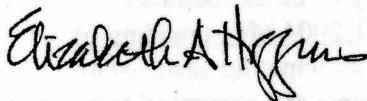
recommend that the USCG deem the application incomplete until such time as the applicant has provided the information identified in our comments.

We appreciate the USCG's cooperation in facilitating meetings with the applicant. Responding to several of our attached comments will require Neptune to make planning decisions that will facilitate the review of any subsequent application.

Thank you for the opportunity to provide comments on the Neptune application. We look forward to continuing to coordinate with the USCG, the applicant, and the other members of the cooperating agency team throughout the DPA review process. Once the USCG has initiated the Environmental Impact Statement (EIS) process, we will provide scoping comments pursuant to our responsibilities under the National Environmental Policy Act (NEPA) to support a comprehensive analysis of project alternatives and the direct, indirect, and cumulative impacts of the project.

Please feel free to contact me at 617-918-1051 should you have any comments or questions about this letter and the attached comments.

Sincerely,



Elizabeth A. Higgins, Director
Office of Environmental Review

Attachment

**Attachment
EPA Comments
Neptune LNG LLC Deepwater Port Act License Application, February 2005**

Clean Air Act

To construct and operate this facility, Neptune will need preconstruction and operating permits issued by EPA. To obtain such permits, Neptune will need to submit complete permit applications to EPA Region 1 in accordance with the Clean Air Act and Massachusetts' regulations at 310 CMR 7.00 Appendix A.

Nonattainment New Source Review

The Commonwealth of Massachusetts is currently designated serious nonattainment under the 1-hour national ambient air quality standard (NAAQS) for ground-level ozone. The nonattainment New Source Review (NNSR) major source threshold for NOx emissions in serious ozone nonattainment areas is 50 tons per year (tpy). On June 15, 2005, when the 8-hour ozone standard becomes effective, eastern Massachusetts will no longer be subject to the 1-hour classification and will be subject only to moderate nonattainment requirements under the 8-hour standard. The minimum federal requirement for the major source threshold for NOx emissions in moderate nonattainment areas is 100 tpy. However, under the Massachusetts State Implementation Plan (SIP) regulations at 310 CMR 7.00 Appendix A, the NNSR major source threshold for NOx emissions throughout the Commonwealth is 50 tpy. EPA currently has no basis for believing this threshold will change.

Neptune's application indicates that it will limit NOx emissions for the LNG project at 99.9 tpy. Because this emissions limit exceeds Massachusetts' 50 tpy major source threshold, the Neptune deepwater port is a "major source" and Neptune will need to obtain a permit issued by EPA in accordance with Massachusetts' NNSR requirements at 310 CMR 7.00 Appendix A. Neptune will need to submit a complete NNSR permit application that includes, but is not limited to, the following:

- An analysis of Lowest Achievable Control Rate (LAER) as defined at 310 CMR 7.00 Appendix A(2);
- An analysis of air emissions offset requirements and the name and location of the sources that will provide the emission reduction credits, in accordance with 310 CMR 7.00 Appendix A(6); and
- An alternative siting analysis, in accordance with 310 CMR 7.00 Appendix A(8).
- A demonstration, including relevant compliance certifications, that all major stationary sources in Massachusetts owned or operated by the applicant which are subject to federally enforceable emissions limitations are in compliance with all applicable emissions limitations and standards under the CAA, in accordance with 310 CMR 7.00 Appendix A(8).

In addition, Neptune will need to submit information sufficient to demonstrate that its proposed restriction on natural gas usage will enable it to meet its annual energy needs and overall business plan. If Neptune's proposed limit on its natural gas usage would not allow it to meet the project's overall operational needs, the information Neptune has submitted would not represent

actual operations and the application would therefore be incomplete. During EPA's meeting with Neptune, there was some indication that Neptune might consider limiting its NOx emissions even further, to 49.9 tpy, to avoid major source status under the Massachusetts SIP. Neptune would need to demonstrate that it could meet its business plan with what would appear to be a 45% capacity factor limitation, assuming no reduction in emissions rates.

Practical enforceability

Neptune must submit information about the methods it will use to determine compliance, including appropriate monitoring, recordkeeping, and reporting methods. Without such information to demonstrate the practical enforceability of the 99.9 tpy NOx limit, this limit is insufficient to enable EPA to determine that the project is not subject to Prevention of Significant Deterioration (PSD) requirements. Under the PSD regulations at 40 CFR § 52.21, which govern emissions of pollutants for which Massachusetts is in attainment of the NAAQS, the major source threshold applicable to the Neptune project is 100 tpy. (The boilers that will provide the necessary energy for Neptune's regasification operations are categorized as fossil fuel boilers totaling more than 250 mmBtu per hour heat input, which is one of 28 specified source categories for which the major source threshold is 100 tpy.)

Conformity

Section 176(c) of the CAA prohibits federal entities from taking actions in nonattainment or maintenance areas which do not conform to the SIP for the attainment and maintenance of the NAAQS. 42 U.S.C. § 7506(c). A general conformity determination is required "for each pollutant where the total of direct and indirect emissions in a nonattainment or maintenance area caused by the federal action would equal or exceed" specified thresholds. 40 CFR § 51.853(b). The applicability threshold for NOx emissions from this project is 100 tpy. Any federal action (or portion thereof) that is covered by a nonattainment NSR or PSD permit is exempt from the requirement to make a conformity determination. 40 CFR § 51.853(d)(1). Massachusetts does not have its own EPA-approved general conformity SIP. Therefore, we look to EPA's federal general conformity regulations to determine the applicability thresholds, unlike the NNSR permitting program where we look to 310 CMR 7.00 Appendix A in the Commonwealth's SIP. Because eastern Massachusetts is currently designated serious nonattainment under the 1-hour ozone standard, the current applicability threshold for NOx is 50 tpy. 40 CFR § 51.853(b)(1). However, on June 15, 2005, when the 8-hour ozone standard becomes effective, eastern Massachusetts will no longer be subject to the 1-hour classification and will be subject only to moderate nonattainment requirements under the 8-hour standard. The applicability threshold for NOx in moderate nonattainment areas within the Ozone Transport Region is 100 tpy. *Id.* Because the deepwater port license in this case is almost certain not to be issued before the 8-hour ozone standard becomes effective, Region 1 has determined that the applicable threshold for general conformity purposes is 100 tpy.

Neptune's application indicates that there may be substantial indirect emissions associated with its proposed LNG facility that will occur within state territorial waters, including emissions from construction of the pipeline lateral and emissions from service vessels traveling from between the port and shore. A conformity determination is required for any such indirect emissions within the state territorial seas because these emissions will occur within the boundaries of a nonattainment area. In addition, because the DPA directs us to apply relevant state law to the deepwater port, a conformity determination is required for support vessel emissions and LNG tanker emissions

occurring within the 500 meter safety zone around the port itself (except for degasification and hotelling emissions from the tankers when moored, which, given the language in the MA SIP, appear to be exempt from the conformity requirements because they will be covered by an EPA-issued nonattainment NSR permit, as discussed above). Neptune must submit information necessary to determine whether the total of any such emissions will exceed 100 tpy. If any direct and indirect emissions will exceed 100 tpy, Neptune must submit information necessary for the USCG to make a conformity determination consistent with CAA § 176(c) and 40 CFR Part 51 Subpart W. A conformity determination, if required, must be made before the Deepwater Port Act license is issued. 42 U.S.C. § 7506(c)(1), CAA § 176(c)(1); 40 CFR § 51.850(b).

Title V

Because Neptune is subject to NNSR requirements of subpart D under Massachusetts' SIP-approved NNSR program, it will need to obtain a Title V operating permit. 33 U.S.C. § 7661a(a), CAA § 502(a). This application, however, may be submitted to EPA within one year of commencement of operation, and therefore it is not necessary to have this application completed prior to commencing construction of the facility. 40 CFR § 70.5(a)(1).

Clean Water Act

Clean Water Act Section 402

To operate this facility, Neptune will need a National Pollutant Discharge Elimination System (NPDES) permit covering its process wastewater discharges pursuant to 33 U.S.C. §§ 1311 and 1342. To obtain such a permit, Neptune will need to file a certified, complete application with EPA New England as required by 40 CFR § 122.21 and 122.22. Neptune has not yet filed a certified, complete NPDES application with EPA. In addition, the draft NPDES permit application submitted in Volume I, Appendix D of Neptune's license application lacks significant information that EPA will need to make its permitting determinations, including the following:

- Process discharges: The draft application does not contain information about the types, concentrations, and amounts of pollutants to be discharged from the facility (e.g., heat, TSS, and oil and grease). For example, the draft application indicates there will be substantial water discharges from the LNG carriers while moored at the deepwater port, but the applicant has not provided information about the temperature of such discharges. In addition, the draft application lacks sufficient information to enable EPA to conclude whether the discharges will comply with the ocean discharge criteria at 40 CFR Part 125, Subpart M.
- Cooling water intake: The facility is proposing to use closed-loop LNG vaporizing units because the ambient sea water temperatures in the area are too cold for vaporizing, but the moored vessels are still projected to withdraw a combined volume of approximately 80 million gallons per day of seawater for ship engine cooling and freshwater production during the gasification process. The applicant has not provided information about the location, design, and construction of the vessel's cooling water intake structure(s). EPA therefore does not have enough information at this time to establish permit conditions on the intake structure(s) consistent with CWA § 316(b).

Clean Water Act Section 404

EPA's § 404(b)(1) guidelines (40 C.F.R. Part 230) set forth the environmental standards which must be satisfied in order for a § 404 permit to be issued by the Army Corps of Engineers. Any project seeking a permit must satisfy four key provisions of the guidelines. First, § 230.10(a) of the guidelines generally prohibits the discharge of dredged or fill material if there exists a practicable alternative which causes less harm to the aquatic ecosystem. Second, § 230.10(b) prohibits the discharge if it would cause or contribute to a violation of state water quality standards; violate applicable toxic effluent standards under section 307 of the Clean Water Act; or jeopardize the existence of any species listed as endangered or threatened under the federal Endangered Species Act. Third, § 230.10(c) generally prohibits the discharge if it would cause or contribute to significant degradation of waters of the U.S. Finally, under § 230.10(d), all appropriate and practicable steps (including compensatory mitigation) must be taken by an applicant to minimize all unavoidable adverse impacts to the aquatic ecosystem.

While the Corps will determine the adequacy of Neptune's application, EPA is offering the following comments consistent with its role of advising the Corps as to whether projects comply with the § 404(b)(1) guidelines. In our view, the Neptune application is not sufficient to demonstrate that the project complies with the guidelines.

First, the application does not contain a substantive analysis of alternatives, nor does it demonstrate that the proposed project is the least environmentally damaging practicable alternative as required by § 230.10(a).

Second, with respect to § 230.10(b), the application contains no site-specific data on sediment chemistry along the pipeline route and buoy locations. There are known areas of contamination in and around the existing Hubline and near the proposed buoy locations. Depending on the levels of contaminants, different construction/sediment handling techniques may be appropriate in order to comply with state water quality standards. For the same reasons, the application should provide information on the source(s), quantity, and quality of any imported backfill material needed to construct this project.

Third, additional surveys and studies will be necessary before the extent of impacts and compliance with § 230.10(c) can be determined. For example, the application package mentions that a geotechnical survey is being conducted. In addition to this survey, the applicant will need to conduct a competent accounting of marine organisms over the full length of the pipeline; evaluate the potential that the project would introduce new exotic species; and analyze the potential for the proposed structures to serve as an attractive nuisance (due to lights, thermal discharges, and physical presence of structures) to marine organisms.

From a construction standpoint, we are concerned about the use of the "dynamically" positioned derrick for laying pipeline in winter conditions in the North Atlantic. The proposed schedule is for 3 months of construction in the winter, assuming no weather delays. Based on our recent experience with the Hubline natural gas pipeline project, we do not believe this schedule is realistic for planning or impact projection purposes. For projects of this type, section 404 permits nearly always contain time-of-year restrictions on construction activities to protect fish-spawning and other biological resources. A revised construction schedule should be developed in conjunction with the state and federal resource agencies that incorporates such restrictions and

the possibility of weather delays and specific contingency plans in the event that target dates are not met.

Finally, the application contains no information with respect to compensatory mitigation for unavoidable adverse impacts to the aquatic ecosystem, as required § 230.10(d). Development of a compensatory mitigation plan will be dependent on an evaluation of the results of the surveys and studies described above.

Marine Protection, Research, and Sanctuaries Act

Based on our current understanding, it does not appear that the applicant proposes to transport materials for the purpose of dumping it in connection with the construction or operation of the Neptune project. At this time, therefore, we do not believe the applicant must apply for a permit pursuant to MPRSA § 102.

NEPA/EIS Scope Considerations

While we recognize that the scoping process for the Environmental Impact Statement (EIS) for the Neptune project has not yet begun, we believe it is important to begin to consider how the EIS will address the Excelerate offshore LNG project, which as currently proposed would serve the same market, use the same technology, and be located in approximately the same offshore site as the Neptune project. Although Excelerate's application for a Deepwater Port Act license has not yet been filed, the pre-application consultation between Excelerate and relevant federal and state agencies has been underway for several months, and the company has stated its intent to file the application in May. Assuming that the application is filed at or near that time, EPA recommends that the Coast Guard prepare a single EIS to address both the Neptune and Excelerate projects for the following reasons.

A single EIS would be consistent with the requirements of the Council on Environmental Quality's Regulations Implementing the Procedural Provisions of NEPA. Those regulations state that in determining the scope of an EIS agencies must consider "Similar actions, which when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography. An agency may wish to analyze these actions in the same impact statement. It should do so when the best way to adequately the combined impacts of similar actions or reasonable alternatives to such actions is to treat them in a single impact statement." 40 CFR § 1508.25(a)(3). We believe the common purpose, technology, timing, and geographical location of the Neptune and Excelerate projects fit the meaning of 'similar actions' in this provision of the regulations.

A single EIS also appears to be consistent with USCG regulations at 33 CFR Part 148, which require that the necessary environmental review criteria be considered in the preparation of "a single, detailed environmental impact statement or environmental assessment for all timely applications covering a single application area." 33 CFR § 148.710. *See also* 33 CFR § 148.707 (identifying relevant environmental criteria).

Finally, a single EIS would in our judgment best serve the public because it likely would bring more efficiency and clarity to the analysis of need, alternatives, and impacts than would separate EISs.